

1968 ANNUAL REPORT
ARCTIC-YUKON-KUSKOKWIM AREA

S E C T I O N I
M A N A G E M E N T

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DIVISION OF COMMERCIAL FISHERIES

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TABLE OF CONTENTS

FOREWORD	1
INTRODUCTION	1
SECTION I - MANAGEMENT	
KUSKOKWIM DISTRICT	9
Commercial Fishery	9
Subsistence Fishery.	13
Escapement	15
YUKON DISTRICT	31
Commercial Fishery	31
Subsistence Fishery.	34
Escapement	34
NORTON SOUND DISTRICT.	50
Commercial Fishery	50
Subsistence Fishery.	52
Escapement	52
Herring Observations	53
PORT CLARENCE DISTRICT	68
Subsistence Fishery.	68
Escapement	68
KOTZEBUE DISTRICT.	71
Commercial Fishery	71
Subsistence Fishery.	73
Escapement	73

INDEX TO FIGURES AND TABLES

INTRODUCTION

Figure 1 - Arctic-Yukon-Kuskokwim Area Map.	2
Table 1 - Arctic-Yukon-Kuskokwim Area Total Salmon Catch by District, 1968.	3
Table 2 - 1968 Arctic-Yukon-Kuskokwim Area Processors and Associated Data.	4

KUSKOKWIM DISTRICT

Table 3 - Commercial Salmon Catches for Kuskokwim River, Quinhagak and Goodnews Bay Areas of the Kuskokwim District, 1960-1968.	17
Table 4 - Residency of Kuskokwim District Commercial Fishermen, 1968	18
Table 5 - Commercial Catches of Whitefish and Sheefish Sold to Bethel Stores by Month During 1967 and 1968	19
Table 6 - Commercial King Salmon Catches From Subdistrict 335-10 Kuskokwim District, 1968	20
Table 7 - Kuskokwim District Commercial Coho Salmon and Incidental Salmon Catch Data Subdistrict 335-10, Drift and Set Nets Combined, 1968.	21
Table 8 - Commercial Salmon Catches from Subdistrict 335-40 Kuskokwim District, 1968	23
Table 9 - Commercial Coho Salmon Catches from Subdistrict 335-50 Kuskokwim District, 1968.	26
Table 10 - Kuskokwim District Subsistence Salmon Fishery Data by Village, 1968.	27
Table 11 - Kuskokwim District Aerial Surveys for 1968 (Actual Counts).	28

YUKON DISTRICT

Table 12 - Commercial Salmon Catches by Type of Gear and Statistical Area, Yukon District (334), 1968	37
Table 13 - Yukon District Commercial Catches, 1960-1968	38
Table 14 - Commercial Salmon Catches from Subdistrict 334-10 Yukon District, Drift and Set Gill Nets Combined, 1968	39
Table 15 - Commercial Salmon Catches from Subdistrict 334-20 Yukon District, Drift and Set Gill Nets Combined, 1968	43

INDEX TO FIGURES AND TABLES (CON'T)

Table 16 - Commercial Salmon Catches from Subdistrict 334-30 Yukon District, Drift and Set Gill Nets Combined, 1968	45
Table 17 - Yukon River Subsistence Catch Data, 1968 (Includes Canadian Catches).	47
Table 18 - Comparative Escapement Data for 1960-1968, Yukon River Drainage	49

NORTON SOUND DISTRICT

Table 19 - Norton Sound Commercial Catches by Subdistrict, 1961-1968.	55
Table 20 - Commercial Salmon Catches from Subdistrict 333-20 (Golovin), Norton Sound District, Set Gill Nets, 1968	57
Table 21 - Commercial Salmon Catches from Subdistrict 333-30 (Moses Point), Norton Sound District, Set Gill Nets, 1968	60
Table 22 - Commercial Salmon Catches from Subdistrict 333-60 (Unalakleet), Norton Sound District, Set Gill Nets, 1968	62
Table 23 - Norton Sound District Subsistence Catches, 1968.	66
Table 24 - Norton Sound District Escapement Data, 1968.	67

PORT CLARENCE DISTRICT

Table 25 - Port Clarence District Subsistence Catches and Aerial Surveys, 1968	69
Table 26 - Comparative Red Salmon Aerial Survey Counts and Subsistence Catches, Pilgrim River Drainage, Port Clarence District, 1963-1968	70

KOTZEBUE DISTRICT

Table 27 - Kotzebue District Commercial Catch Data, 1968.	75
Table 28 - Kotzebue District Subsistence Chum Salmon Catches, 1962-1968.	77
Table 29 - Subsistence and Commercial Sheefish Catches Kotzebue District, 1967-1968	78
Table 30 - Kotzebue District Aerial Surveys, 1968	79

APPENDIX TABLES

Table 1 - Kuskokwim District (335) Vessel and Gear Licenses Issued by Subdistrict, 1960-1968	81
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INDEX TO FIGURES AND TABLES (CON'T)

Table 2	- Kuskokwim District (335) King Salmon Commercial Catch Data, 1960-1968.	82
Table 3	- Comparative Commercial Catch Data by Fishing Period for Subdistrict 335-10 King Salmon Season, 1965-1968.	83
Table 4	- Comparative Commercial Coho Salmon Catch Data, Kuskokwim District Drift and Set Nets Combined, 1960-1968.	84
Table 5	- Commercial Salmon Pack by Species and Type of Processing, Kuskokwim District, 1964-1968.	85
Table 6	- Dollar Value Estimates of the Kuskokwim District Commercial Fishery, 1964-1968.	86
Table 7	- Mean Salmon Weights, Kuskokwim District, 1964-1968 and Estimated Mean Prices Paid to Fishermen by Species Kuskokwim District, 1964-1968.	87
Table 8	- Comparative Kuskokwim River Subsistence Catches of King Salmon by Village for 1962-1968 (Averages shown for 1960-1968)	88
Table 9	- Comparable Kuskokwim River Subsistence Catches of Small Salmon by Village for 1962-1968 (Averages shown for 1960-1968)	89
Table 10	- Comparative Subsistence Fishery Data (Not Expanded) for Kuskokwim River, 1960-1968	90
Table 11	- Yukon District (334) Vessel and Gill Net Licenses Issued by Subdistrict, 1960-1968	91
Table 12	- Yukon District (334) King Salmon Commercial Catch Data, 1960-1968.	92
Table 13	- Comparative Fall Salmon Commercial Fishery Data, Subdistrict 334-10, 1961-1968.	93
Table 14	- Commercial Salmon Pack by Species and Type of Processing Yukon District, 1960-1968	94
Table 15	- Dollar Value Estimates of Yukon District Commercial Fishery, 1960-1968.	95
Table 16	- Mean Weights, Numbers of Salmon Per Case and Prices Paid to Fishermen, Yukon District, 1961-1968	96
Table 17	- Yukon River Comparative Subsistence Catch and Effort Data, 1961-1968	97
Table 18	- Vessel and Gear Licenses Issued, Norton Sound District, 1961-1968.	98
Table 19	- Comparative Norton Sound District Commercial Catch Data, 1962-1968, Subdistrict 333-20 (Golovin).	99
Table 20	- Comparative Norton Sound District Commercial Catch Data, 1962-1968, Subdistrict 333-30 (Moses Point).	100
Table 21	- Comparative Norton Sound Commercial Catch Data, 1961-1968, Subdistrict 333-60 (Unalakleet)	101
Table 22	- Commercial Salmon Pack by Species and Type of Processing Norton Sound District, 1961-1968.	102
Table 23	- Dollar Value Estimates of Norton Sound District Commercial Fishery, 1961-1968.	103

INDEX TO FIGURES AND TABLES (CON'T)

Table 24 - Mean Weights and Numbers of Salmon per Case, Norton Sound District, 1962-1968 and Estimated Mean Prices Paid to Fishermen, Norton Sound District, 1962-1968.	104
Table 25 - Kotzebue District Fishing Effort, 1962-1968.	105
Table 26 - Comparative Commercial Chum Salmon Catch Statistics, Kotzebue District, 1962-1968	106
Table 27 - Salmon Pack by Species and Type of Processing Kotzebue District, 1962-1968	107
Table 28 - Dollar Value Estimates of Kotzebue District Commercial Fishery, 1962-1968.	108
Table 29 - Mean Weights and Number of Salmon per Case Kotzebue District, 1962-1968	109
Table 30 - Estimated Mean Prices Paid to Fishermen by Species, Kotzebue District, 1962-1968	109
Table 31 - Subsistence Chum Salmon Catch per Fisherman, Kotzebue District, 1962-1968	110

F O R E W O R D

With the exception of the "Introduction" section below, this report presents fishery information separately for five regulatory districts (Kuskokwim, Yukon, Norton Sound, Port Clarence and Kotzebue). Most of the comparative fishery data (since Statehood) are presented in Appendix Tables which can be found at the end of the report.

I N T R O D U C T I O N

The Arctic-Yukon-Kuskokwim area, as shown in Figure 1, is that portion of the State north of the Alaska Range and the Bristol Bay drainage. This is the largest management area in the State and is equal to the combined areas of California, Oregon, Washington and Idaho.

A total of 1,350 licensed commercial fishermen, nearly all Eskimos or Indians, harvested 150,728 king, 5,884 red, 174,490 coho, 146,997 pink and 162,661 chum salmon during the 1968 season. In addition, 1,461 subsistence fishing families were surveyed by the Department and a resultant catch of 50,552 king and 529,001 other salmon species, mostly chums, was recorded. Table 1 shows the 1968 commercial and subsistence catches by district. Table 2 is a list of A-Y-K buyers and processors, showing associated processing information for each.

During 1968 approximately \$935,000 was paid to fishermen in the Arctic-Yukon-Kuskokwim area for salmon sold commercially. Wages earned by cannery workers and tender boat operators, at least \$315,000, add considerably to the economic importance of the commercial fishery. In this area of low industrialization, such income is of major significance. The first wholesale value of the A-Y-K salmon pack (all products) is estimated to be about \$2,850,000.

A minimum total of 596,132 salmon was taken for subsistence purposes during the 1968 season. In terms of money required to purchase a similar quantity of meat substitute, the subsistence catch is equal in importance to the commercial catch. Because of its importance, the Arctic-Yukon-Kuskokwim area subsistence fishery influences the management program to a great extent.

TABLE 1

ARCTIC-YUKON-KUSKOKWIM AREA TOTAL SALMON CATCH BY DISTRICT, 1968

	Kings	Reds	Cohos	Pinks	Chums	All Species
KUSKOKWIM:						
Commercial	43,157	5,884	154,302	75,818	19,684	298,845
Subsistence	35,380				278,008 ^{1/}	313,388
Sub-total	<u>78,537</u>	<u>5,884</u>	<u>154,302</u>	<u>75,818</u>	<u>297,692</u>	<u>612,233</u>
YUKON:						
Commercial	106,526		13,303		67,375	187,204
Subsistence	14,934				192,124 ^{1/}	207,058
Sub-total	<u>121,460</u>		<u>13,303</u>		<u>259,499</u>	<u>394,262</u>
NORTON SOUND:						
Commercial	1,045		6,885	71,179	45,390	124,499
Subsistence	237		2,391	36,912	11,661	51,201
Sub-total	<u>1,282</u>		<u>9,276</u>	<u>108,091</u>	<u>57,051</u>	<u>175,700</u>
PORT CLARENCE:						
Commercial						
Subsistence	40	688	133	1,906	904	3,671
Sub-total	<u>40</u>	<u>688</u>	<u>133</u>	<u>1,906</u>	<u>904</u>	<u>3,671</u>
KOTZEBUE:						
Commercial					30,212	30,212
Subsistence					20,814	20,814
Sub-total					<u>51,026</u>	<u>51,026</u>
GRAND TOTAL FOR A-Y-K AREA:						
Commercial	150,728	5,884	174,490	146,997	162,661	640,760
Subsistence	50,591	688	2,524	38,818	503,511	596,132
TOTALS	<u>201,319</u>	<u>6,572</u>	<u>177,014</u>	<u>185,815</u>	<u>666,172</u>	<u>1,236,892</u>
TOTALS, 1967	243,328	2,722	73,100	47,335	706,830	1,073,315
TOTALS, 1966	184,268	2,137	51,100	28,740	640,273	806,518
TOTALS, 1965	189,888	3,690	20,452	21,464	875,830	1,111,324

^{1/} Mostly chum salmon, some red, coho and pink salmon.

TABLE 2

1968 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Marubeni-Ida (America) Inc. 1516 IBM Bldg. Seattle, Washington	Salmon Roe		N/A	All Districts
Alaska Smokey Joe's Mile 7, Seward Highway Anchorage, Alaska	Fresh Chum Salmon Fresh Char, Sheefish		.16 per lb. .15 per lb.	Kotzebue
Rotman Seafoods Kotzebue, Alaska	Fresh Chum Salmon Fresh Sheefish		$\frac{1}{1}$	Kotzebue
Kotzebue Sound Area Fishery Co-op Box 270 Kotzebue, Alaska	Fresh Chum Salmon Fresh Sheefish, Char		.14 per lb. .14 per lb.	Kotzebue
Peninsula Fisheries Co. 1402 K Street Anchorage, Alaska	Frozen & Salted Salmon King Coho Pink Chum Frozen Char		.25 per lb. .14 per lb. .06-.12 per lb. .10-.15 per lb. $\frac{1}{1}$	Norton Sound
Martin's Cold Storage Nome, Alaska	Fresh Chum Salmon		$\frac{1}{1}$	Norton Sound
Northern Commercial Co. Nome, Alaska Unalakleet, Alaska	Fresh Salmon King Coho Chum		.34 per lb. .16 per lb. .10 per lb.	Norton Sound
U. S. Mercantile Co. Nome, Alaska	Fresh Chum Salmon		$\frac{1}{1}$	Norton Sound

TABLE 2 (CON'T)

1968 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Andy Edge Napaskiak, Alaska	Fresh King Salmon		4.00 each	Kuskokwim
Clark Fishing Enterprise Aniak, Alaska	Fresh Dressed Salmon King Coho		4.00 each .50 each	Kuskokwim and Yukon
Kuskokwim Fishermen's Co-op Bethel, Alaska	Fresh Dressed, Salted Salmon King Red Coho Pink Chum		3.90 each, or .15 per lb. .60 each .67 each .20 each .35 each	Kuskokwim
Kuskokwim Packing Co. Bethel, Alaska	Mild Cure King Salmon Fresh Dressed Salmon Coho Chum		4.00 each .65 each .25 each	Kuskokwim
Northern Commercial Co. Bethel, Alaska	Frozen King Salmon		3.66 each	Kuskokwim
Samuelson, John Bethel, Alaska	Smoked King Salmon		N/A	Kuskokwim
Schenk Seafood Sales 1600 Britton Road Bellingham, Washington 98225	Fresh Dressed Salmon King Coho Chum		3.75 each .65 each .25 each	Kuskokwim

TABLE 2 (CON'T)

1968 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Sumstad Navigation Co. 4243 28th Place West Seattle, Washington	Frozen Salmon			Kuskokwim
	King		4.00 each	
	Coho		.60 each	
Theodore Fisheries 700 Overlake Drive E. Bellevue, Washington	Frozen & Fresh Dressed Salmon			Kuskokwim
	King		3.28 each	
	Red		.60 each	
	Coho		.60 each	
	Pink		.20 each	
	Chum		.35 each	
Swanson Brothers Bethel, Alaska	Frozen King Salmon		5.00 each	Kuskokwim
Western Alaska Airlines Dillingham, Alaska	Fresh Dressed Salmon			Kuskokwim
	King		3.94 each	
	Red		.60 each	
	Coho		.60 each	
Northern Commercial Co. 419 Colman Building Seattle, Washington	Mild Cured, Hard Salt & Frozen Kings		4.72 each	Yukon
Peter E. Merry 211 Slater Drive Fairbanks, Alaska	Fresh King Salmon		.23 per lb.	Yukon
John Amukon Scammon Bay, Alaska	Hard Salt Kings		4.50	Yukon
Mickie Jones Pilot Point, Alaska	Frozen King Salmon		<u>1/</u>	Yukon

TABLE 2 (CON'T)

1968 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Mountain Village Fish Co. Mountain Village, Alaska	Canned 1/2# Flats			Yukon
	Kings	3.2	4.50 each	
	Chums	12.0	.25 each	
	Hard Salt Kings		4.50 each	
Point Adams Packing Co. Hammond, Oregon	Canned 1# and 1/2# Ovals			Yukon
	Canned 1/2# Flats Kings	3.5	.18 per lb.	
Yukon Packers 1032 Eighth Avenue Fairbanks, Alaska	Canned 1/2# Flats			Yukon
	Kings	3.3	4.50 each	
Weisner Trading Co. Rampart, Alaska	Canned 1# Flats & Tails			Yukon
	Canned 1/2# Flats Kings		.20 per lb.	
Bering Sea Fisheries, Inc. 611 Lowman Bldg. Seattle, Washington	Frozen Salmon in round			Yukon
	Kings		.22 per lb.	
	Chums		.50 each	
	Cohos		.50 each	
	Canned 1# Tails - Chum		.50 each	
Arnold Akers Chuloonawick, Alaska (via Kotlik, Alaska)	Mild Cure King Salmon		5.00 each	Yukon
	Fresh Chum Salmon		.50 each	
Felix Rasmus 254 Ellingsen Fairbanks, Alaska	Fresh King & Chum Salmon		N/A	Yukon

TABLE 2 (CON'T)

1968 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Tommy Heckman Pilot Station, Alaska	Hard Salt King Salmon		N/A	Yukon
Paul Beard Tanana, Alaska	Fresh King Salmon		.22 per lb.	Yukon
Emmonak Fisheries 805 W. 3rd Avenue Anchorage, Alaska	Frozen Salmon King Coho Chum		<u>1/</u>	Yukon
Puget Sound Salmon Egg Co. 1440 S. Jackson Street Seattle, Washington	Salmon Roe		N/A	Yukon

1/ Data unavailable.

YUKON DISTRICT

COMMERCIAL FISHERY

This district includes all waters of the Yukon River and its tributary streams and all coastal waters from Cape Stephens, including Stuart Island southward to 62° North latitude. Commercial fishing for salmon is permitted upstream from the mouths of the Yukon and Black Rivers.

As shown in Figure 1, the commercial fishing area is divided into four subdistricts: 334-10, 334-20, 334-30 and 334-40 for regulatory purposes. These subdistricts are further divided into statistical areas for management and research purposes (Figures 2 and 3). The main commercial fishery is located in the lower two subdistricts, 334-10 and 334-20. The king salmon season in these two subdistricts opens June 1 and is closed by emergency order by late June or early July depending on the strength of the run. Commercial fishing has been allowed for four days a week since 1961, but beginning with the 1968 season, the Alaska Board of Fish and Game reduced the commercial fishing time to three and one-half days a week. This was done to insure adequate escapements in the face of increasing fishing effort and efficiency.

During recent years, commercial fishing has been re-opened in 334-10, beginning in late July. The mid-season closures in these subdistricts are for the purpose of insuring that adequate catches of summer chum salmon are made by upriver subsistence fishermen.

Commercial fishing in 334-30 is allowed for a total of four days a week until quotas of 3,000 king and 3,000 chum and coho salmon combined are taken. In 334-40 fishing is allowed seven days a week until quotas of 2,000 king and 2,000 chum and coho salmon combined are taken.

In 1968 there were 106,526 king, 13,303 coho and 62,679 chum salmon taken for commercial purposes. The 1968 commercial catches by subdistrict, statistical area and type of gear are shown in Table 12. Table 13 compares commercial catches made in the district since 1960.

The number of licensed fishermen decreased slightly from that of 1967 with 585 commercial fishermen licenses, 510 fishing vessel licenses, 223 drift gill net licenses and 410 set gill net licenses being issued. This was the first decrease in license registration for the district since 1963. Several fishwheels (gear license not required) are operated also each year, the majority of which are used in 334-40. There were only two non-resident fishermen in 1968, and the vast majority of the fishermen are Eskimo and Indian residents of the Yukon drainage.

A little over one-half of the 1968 king salmon catch was processed by four local shore canneries. The remainder of the king salmon catch was

handled by three mild cure operations, two freezerships, one small shore freezing plant and several small operations which flew fresh fish to Anchorage and Fairbanks. The majority of the coho and chum salmon were frozen in the round by a freezership for the Japanese market.

In 1968 Yukon district commercial fishermen received about \$535,000 for their catches. In addition, a minimum of \$264,000 in wages was estimated to have been earned by processing plant employees and tender boat operators. The latter figure was obtained from information supplied by a majority of the buyers and processors. The first wholesale value of the 1968 pack was estimated at \$1,655,156.

Appendix Tables 11 through 16 show comparative license registration catch, pack, dollar value, mean fish price and weight information for the past several years.

King Salmon Fishery: The 1968 district catch of 106,526 king salmon was 3,001 less fish than the 1961-1967 average. The greatest catch for this district was 129,706 king salmon taken in 1967. The 1968 catch data presented in this report does not include 2,152 kings taken by Canadian commercial fishermen at Dawson in Yukon Territory.

Tables 14 through 16 present daily catch data for the lower three subdistricts. Daily catch data for 334-40 are not presented (see Appendix Table 12).

Although difficult to determine, the decrease in the weekly fishing time for 334-10 and 334-20 during the 1968 season probably reduced the total district catch by 10,000 to 15,000 fish. Based on catch per vessel hour data obtained since 1961, the 1968 king salmon run was average or below average in magnitude. The combined catch per vessel hour for 334-10 and 334-20 was .81 and was lower than any year in the 1961-1968 period except 1962.

The exact effect of the decrease in fishing time is not known. Shorter fishing periods probably increased the relative effectiveness of drift gill net fishermen, but decreased the effectiveness of set gill net fishermen. Most set gill net fishermen spend a considerable amount of time setting out or picking up gear fished at several sites, while a drift net fisherman, operating a single net, does not have this problem. Also most Yukon drift gill net fishermen have seldom fished continually throughout the entire fishing period which, during most years, has been 48 hours in duration.

An interesting aspect of the 1968 run was its unusual migration pattern. The bulk of the run entered the south mouth with very few fish entering the middle, north and other channels. The catch reflected this, i.e., a total of about 27,000 kings were taken in the middle mouth during 1967 compared to only 6,700 taken in 1968 by a similar number of fishermen. The south mouth catch was similar for both years, 25,826 in 1967 and 27,859 in 1968. As a consequence, fishermen and processors dependent on the middle and north mouth runs experienced their worst season in 1968 with the opposite being true for fishermen and processors in the south mouth area.

Fish losses were greater than normal this season, and the bulk of this loss occurred in the south mouth area during the peak of the run, June 19-22. An estimated loss of at least 25,000 pounds was due to the inability of one processor to handle the large catch and the breakdown of a fish tender belonging to another processor.

The reduction of fishing time did not create an enforcement problem. Through notices posted in all villages, radio broadcasts and personal contact, nearly all fishermen were well acquainted with the new regulation change before the fishing season began. The most common infractions involved identification and separation of fishing gear, in addition to a few fishermen fishing just outside the river mouth.

The 3,000 quota in subdistrict 334-30 was exceeded by 1,543 fish. It was not possible to close this fishery when the quota was reached because of delays in tabulating catches.

The 2,000 quota was not officially filled in subdistrict 334-40 but there were reports of considerable numbers of kings sold that were not entered on fish tickets. Illegal fishing and purchasing of salmon is an increasing problem in this area and an employee will be stationed in the upper Yukon during 1969 for enforcement and management purposes. Also, a June 1 net and vessel licensing deadline for subdistricts 334-30 and 334-40 was promulgated beginning with the 1969 season by the Alaska Board of Fish and Game which will alleviate many "last minute" licensing problems in this area.

Chum and Coho Salmon Fishery: Tables 14 through 16 also show commercial catch data for these species. A total of 13,303 coho and 67,375 chum salmon were taken in the district during 1968. The 1968 catches exceeded the 1961-1967 averages by 31,882 chum and 4,040 coho salmon.

Excluding the 1920's, the sale of other species of salmon captured incidentally during the king salmon season in the lower two subdistricts has been allowed only since 1967. The incidental catch of summer chum salmon, utilized extensively by upriver subsistence fishermen, is limited during this season as only gill nets of 8 inches stretched measure or greater can be operated. There were 14,362 incidentally caught chum salmon sold in the lower two subdistricts during 1968. It is estimated that at least double this amount could have been sold if adequate processing and tendering facilities were available to all fishermen.

A total of 15 kings, 13,153 cohos and 49,857 chums were taken in subdistrict 334-10 during July 22 to August 28, with fishing occurring during four days a week. Most of this catch was processed by an American freezer ship and later transferred to Japanese ships at St. Michaels. The better-than-average total catch was due largely to an increase in fishing effort. An additional catch of 150 cohos and 3,136 chums was made in subdistrict 334-30.

SUBSISTENCE FISHERY

Yukon River subsistence fishermen took an estimated 14,832 king salmon and 189,607 "small salmon", mostly chums, during 1968. This catch was taken from both the Alaskan and Canadian portions of the drainage. Table 17 shows catch data for each Yukon River village in 1968 and Appendix Table 17 shows comparative catch data for 1961-1968. Table 17 does not include 102 kings and 2,517 other salmon taken by fishermen from the village of Stebbins located northeast of the Yukon River mouth.

The 1968 king salmon catch was the next to smallest catch recorded during the 1961-1968 period. The 1968 "small salmon" catch was the smallest ever recorded for this fishery. The small 1968 catches were influenced by a very active fire fighting season which took many of the men from the villages during most of the fishing "season". Also the small catches are viewed as another step in the declining dependence of the native people on subsistence fishing.

Although a similar number of "fishing families" were recorded in 1968 (compared 1966-67), the effort was not efficient as in many cases wives and children were the only ones left to fish. Sled dogs are the greatest consumers of "small salmon" and have not declined in numbers to the point that they can be sustained by the very small 1968 catch. A great many dogs may starve to death during the winter of 1968-1969 unless the lack of salmon can be compensated by catches of other fish and game species or by contributions of "Friskies" from outside communities.

Similar to the Kuskokwim River survey, a greater attempt was made to contact all residents in each village during 1968. A total of 739 families were contacted but only 516 had one or more members that were subsistence fishermen. The 223 non-fishing families, numbering 976 persons, owned 562 dogs and 92 snow-machines.

As previously mentioned in the section dealing with the Kuskokwim River subsistence fishery, the catches of various freshwater species were recorded for the village of St. Marys from September, 1967 through May, 1968. During this period the following catches were recorded by twenty fishing families: 6,079 whitefish, 554 sheefish, 3,999 pike, 2,143 burbot, 507 tomcod, 20 grayling, 102 lamprey and 505 pounds of blackfish. This catch amounted to about 40,000 pounds and if the 1967 salmon harvest is included, approximately 120,000 pounds (round weight) of all species of fish were taken from June, 1967 through May of 1968.

ESCAPEMENT

The Yukon River drainage (330,000 square miles) is too extensive for complete aerial survey coverage during any given season. In addition, poor survey conditions have prevented surveys from being flown during some years.

Table 18 presents comparative king salmon escapement data for certain tributaries during the 1960-1968 period. Although not conclusive, the 1968 counts generally continue the relatively low escapement trend of the previous two seasons. King salmon counts for the Andreafsky River system and at the Whitehorse Dam site were relatively poor. The Salcha River escapement, however, was considered fair to good. The low Anvik River count was influenced by very poor survey conditions.

A minimum estimate of 237,000 chum and pink salmon were counted in the Andreafsky River system during 1968. Species identification is difficult to determine in this system, but the escapements of both species were judged to be of nearly equal magnitudes. A minimum total of 100,000 chums, including a very few pinks, were observed spawning in the Anvik River. In addition, a total of about 3,800 chum salmon were observed in the Salcha River. Comparative chum and pink salmon counts are not available but the 1968 chum and pink salmon escapements appeared to be at least fair to good.

During August 17-20, several upper Yukon River tributaries located in Yukon Territory were surveyed. The purpose of the trip was to determine the extent of the king salmon escapement into Yukon Territory and to locate several "index" streams that could be surveyed each year to determine relative escapement magnitudes, important to the management of the commercial fishery.

Most of the surveys were conducted during poor weather conditions (low overcast, rain) and, in addition, the brownish water stain, dark colored bottom and sharp bends in many of the streams made counting extremely difficult.

The surveys indicated that most king salmon spawning occurs near lake outlets or in streams that drain large lakes. This must be a result of the stabilizing effect the large lakes have on water flows and temperatures. Generally, the lakes and their outlet streams have dark colored bottoms and brownish-stained water. Streams that do not drain lakes have relatively clear, unstained water and light colored bottoms. The streams of the latter type either contained few or no king salmon.

Most of the streams surveyed had very discontinuous spawning habitat, and therefore, a discontinuous distribution of spawners. For example, there may be several miles of good spawning habitat (good gravel, moderate current) interspersed between extensive areas of sluggish current and a bottom consisting of silt, mud and/or weeds and algae. The spawning potential of each stream can be determined only by surveying its entire course. King salmon spawning activity was probably a few days past its peak as carcasses and unattended reds were observed. Surveys in 1968 probably should have been made one week earlier.

Although the surveys missed many king salmon, they were indicative of the major concentrations of spawners and served to distinguish good from poor spawning streams. King salmon were found spawning in three streams (Hoole River, Pleasant Creek, Ollie Lake outlet) that had not been

documented previously, at least in published reports or records maintained by the Whitehorse office of the Canadian Department of Fisheries. An additional three or four days would be required to survey other portions of the Yukon River in Canada reported or suspected to contain spawners.

Major concentrations of king salmon were observed in the following Yukon Territory streams:

1. Main Teslin River including Nisutlin River and Nisutlin Lake outlet. The Nisutlin River would be a good "index" stream as it has clear water, a light bottom and few sharp bends.

2. Big Salmon River including outlet of Northern Lake.

3. Little Salmon River.

4. Pelly River system: Moose River, Earn River, Kalzas River, Hoole River, outlet to Pelly Lakes, Ross River including outlets of Fields and Lewis Lakes.

5. Stewart River system: Pleasant Creek, outlet of Ollie Lakes.

TABLE 12

COMMERCIAL SALMON CATCHES BY TYPE OF GEAR
AND STATISTICAL AREA, YUKON DISTRICT (334), 1968

Statistical Area	Drift Net			Set Net			All Gear			Maximum No. of Boats
	King	Coho	Chum	King	Coho	Chum	King	Coho	Chum	
334-11				4,047		3	4,047		3	10
334-12	62	13	125	27,797	3,963	23,172	27,859	3,976	23,297	120
334-13	630		1,238	7,367	3,886	24,278	7,997	3,886	25,516	49
334-14	103		73	3,099	175	875	3,202	175	948	23
334-15	42		31	6,658	2,302	6,172	6,700	2,302	6,203	74
334-16				919			919			9
334-17	13,651	472	1,467	3,727	2,342	4,985	17,378	2,814	6,452	58
334-18	10,318		380	1,045		53	11,363		433	45
Sub-total 334-10	24,806	485	3,314	54,659	12,668	59,538	79,465	13,153	62,852	388
334-21	7,711		571	135		15	7,846		586	25
334-22	5,583		307	367		10	5,950		317	33
334-23	3,632		191	574		2	4,206		193	47
334-24	3,066		285	324		26	3,390		311	26
Sub-total 334-20	19,992		1,354	1,400		53	21,392		1,407	131
334-31	1,228		28	661		20	1,889		48	15
334-32	5			2,649	150	3,068	2,654	150	3,068	16
Sub-total 334-30	1,233		28	3,310	150	3,088	4,543	150	3,116	31
334-40				695			1,126 ^{1/}			10
Sub-total 334-40				695			1,126			10
TOTAL 334	46,031	485	4,696	60,064	12,818	62,679	106,526	13,303	67,375	560

^{1/} 431 king salmon caught by fishwheel in subdistricts 334-40 are included.

TABLE 13
YUKON DISTRICT COMMERCIAL SALMON CATCHES, 1960-1968

Year	Kings	Reds	Cohos	Pinks	Chums	All Species
1960	67,591					67,591
1961	120,260		2,855		42,461	165,576
1962	94,734	12	23,339	32	53,723	171,840
1963	116,994		5,572			122,566
1964	93,587		2,446		8,347	104,380
1965	118,098		350		23,317	141,765
1966	93,315		19,254		71,405	183,974
1967	129,706	2	11,031	201	49,198	190,138
1968	106,526		13,303		67,375	187,204

TABLE 14

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-10
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)			Cumulative Catch		
			King	Coho	Chum	King	Coho	Chum
6/3	6		1			1		
6/4	24		23			24		
6/5	6		38			62		
	<u>36</u>	30	<u>62(+)</u>					
6/6	6		11			73		
6/7	24		504		1	577		1
6/8	18		825		13	1,402		14
	<u>48</u>	143	<u>1,340(0.2)</u>		<u>14(+)</u>			
6/10	6		29			1,431		
6/11	24		5,982		222	7,413		236
6/12	6		3,863		122	11,276		358
	<u>36</u>	284	<u>9,874(1.0)</u>		<u>344(+)</u>			
6/13	6		180		1	11,456		359
6/14	24		8,959		467	20,415		826
6/15	18		5,278		335	25,693		1,161
	<u>48</u>	323	<u>14,417(0.9)</u>		<u>803(0.1)</u>			
6/17	6		184			25,877		
6/18	24		3,365		114	29,242		1,275
6/19	6		2,555		610	31,797		1,885
	<u>36</u>	336	<u>6,104(0.5)</u>		<u>724(0.1)</u>			
6/20	6		568		8	32,365		1,893
6/21	24		9,800		1,459	42,165		3,352
6/22	18		14,839		2,930	57,004		6,282
	<u>48</u>	357	<u>25,207(1.5)</u>		<u>4,397(0.3)</u>			

TABLE 14 (CON'T)

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-10
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)			Cumulative Catch		
			King	Coho	Chum	King	Coho	Chum
6/24	6		265		119	57,269		6,401
6/25	24		9,423		1,514	66,692		7,915
6/26	6		4,108		1,096	70,800		9,011
	<u>36</u>	326	13,796(1.2)		2,729(0.2)			
6/27	6		436		138	71,236		9,149
6/28	24		3,621		1,034	74,857		10,183
6/29	18		3,005		1,305	77,862		11,488
	<u>48</u>	249	7,062(0.6)		2,477(0.2)			
7/1	6		13		20	77,875		11,508
7/2	24		1,030		659	78,905		12,167
7/3	6		545		828	79,450		12,955
	<u>36</u>	163	1,588(0.3)		1,507(0.3)			
Sub-total ^{1/}	372		79,450(0.9)		12,995(0.1)			
7/22	18				1,486			1,486
7/23	24		4		2,752	4		4,238
7/24	6			1	1,463		1	5,701
	<u>48</u>	127	4(+)	1(+)	5,701(0.9)			
7/25	6				26			5,727
7/26	24				28			5,755
7/27	18			8	271		9	6,026
	<u>48</u>	53		8(+)	325(0.1)			
7/29	18		1	4	392	5	13	6,418
7/30	24		2	18	2,450	7	31	8,868
7/31	6			105	7,651		136	16,519
	<u>48</u>	114	3(+)	127(+)	10,493(2.0)			

TABLE 14 (CON'T)

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-10
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)			Cumulative Catch		
			King	Coho	Chum	King	Coho	Chum
8/1	6				26			16,545
8/2	24		1	70	3,045	8	206	19,590
8/3	18		2	79	1,383	10	285	20,973
	<u>48</u>	123	<u>3(+)</u>	<u>149(+)</u>	<u>4,454(0.8)</u>			
8/5	18			411	9,169		696	30,142
8/6	24		2	328	6,565	12	1,024	36,707
8/7	6			134	2,603		1,158	39,310
	<u>48</u>	143	<u>2(+)</u>	<u>873(0.1)</u>	<u>18,337(2.7)</u>			
8/8	6							
8/9	24			292	1,977		1,450	41,287
8/10	18			214	754		1,664	42,041
	<u>48</u>	104		<u>506(0.1)</u>	<u>2,731(0.5)</u>			
8/12	18			99	111		1,763	42,152
8/13	24			219	121		1,982	42,273
8/14	6			391	366		2,373	42,639
	<u>48</u>	62		<u>709(0.2)</u>	<u>598(0.2)</u>			
8/15	6			5	2		2,378	42,641
8/16	24		1	657	461	13	3,035	43,102
8/17	18			1,876	2,429		4,911	45,531
	<u>48</u>	65	<u>1(+)</u>	<u>2,538(0.8)</u>	<u>2,892(0.9)</u>			
8/19	18			603	553		5,514	46,084
8/20	24			1,875	1,214		7,389	47,298
8/21	6			1,189	1,258		8,578	48,556
	<u>48</u>	79		<u>3,667(1.0)</u>	<u>3,025(0.8)</u>			

TABLE 14 (CON'T)

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-10
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)			Cumulative Catch			
			King	Coho	Chum	King	Coho	Chum	
8/22	6			135	7		8,713	48,563	
8/23	24			1,583	894		10,296	49,457	
8/24	18			1,370	285		11,666	49,742	
	<u>48</u>	73		<u>3,088(0.9)</u>	<u>1,186(0.3)</u>				
8/26	18			282	20		11,948	49,762	
8/27	24		1	519	44	14	12,467	49,806	
8/28	6		1	686	51	15	13,153	49,857	
	<u>48</u>	41	<u>2(+)</u>	<u>1,487(0.8)</u>	<u>115(0.1)</u>				
Sub-total ^{2/}	528		15(+)	13,153(0.3)	49,857(1.1)				
GRAND TOTAL	<u>900</u>			<u>79,465(0.6)</u>	<u>13,153(0.1)</u>	<u>62,852(0.4)</u>	<u>79,465</u>	<u>13,153</u>	<u>62,852</u>

^{1/} King salmon season (6/3-7/3).

^{2/} Fall salmon season (7/22-8/28).

TABLE 15

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-20
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)		Cumulative Catch		
			King	Chum	King	Chum	
6/2	6						
6/3	24		4		4		
6/4	18		31		35		
	<u>48</u>	4	<u>35(0.2)</u>				
6/6	6		4		39		
6/7	24						
6/8	6		68		107		
	<u>36</u>	30	<u>72(0.1)</u>				
6/9	6						
6/10	24		148		255		
6/11	18		732		987		
	<u>48</u>	71	<u>880(0.3)</u>				
6/13	6		20		1,007		
6/14	24		1,507	2	2,514		2
6/15	6		1,026	10	3,540		12
	<u>36</u>	113	<u>2,553(0.6)</u>	<u>12(+)</u>			
6/16	6						
6/17	24		1,225	65	4,765		77
6/18	18		2,071	24	6,836		101
	<u>48</u>	123	<u>3,296(0.6)</u>	<u>89(+)</u>			

TABLE 15 (CON'T)

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-20
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	Hours Fished	No. of Boats	Total Catch (Catch/Boat Hour)		Cumulative Catch	
			King	Chum	King	Chum
6/20	6		2		6,838	
6/21	24		1,667	38	8,505	139
6/22	6		4,641	106	13,146	245
	<u>36</u>	110	6,310(2.2)	144(0.1)		
6/23	6		102		13,248	
6/24	24		1,985		15,233	
6/25	18		2,042	13	17,275	258
	<u>48</u>	109	4,129(0.8)	13(+)		
6/27	6		170		17,445	
6/28	24		1,331	244	18,776	502
6/29	6		910	61	19,686	563
	<u>36</u>	101	2,411(0.7)	305(0.1)		
7/1	30		624	186	20,310	749
7/2	18		1,082	658	21,392	1,407
	<u>48</u>	100	1,706(0.4)	844(0.2)		
TOTAL	374		21,392(0.7)	1,407(+)		

TABLE 16

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-30
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	No. of Boats	Total Catch			Cumulative Catch		
		King	Coho	Chum	King	Coho	Chum
6/7	6	29			29		
6/11	5	13			42		
6/13	4	21			63		
6/14	18	319		1	382		1
6/18	20	421		19	803		20
6/19	12	224		23	1,027		43
6/20	18	314		5	1,341		48
6/21	23	600			1,941		
6/24	1	44			1,985		
6/25	23	1,204			3,189		
6/26	14	809			3,998		
6/27	13	520			4,518		
6/28	1	25		20	4,543		68
Sub-total ^{1/}		4,543	0	68	4,543		68

TABLE 16 (CON'T)

COMMERCIAL SALMON CATCHES FROM SUBDISTRICT 334-30
YUKON DISTRICT, DRIFT AND SET GILL NETS COMBINED, 1968

Date of Landing	No. of Boats	Total Catch			Cumulative Catch		
		King	Coho	Chum	King	Coho	Chum
8/6	3			144			144
8/7	2			100			244
8/8	2			26			270
8/9	2			69			339
8/13	5			567			906
8/14	3			252			1,158
8/15	4			279			1,437
8/16	3			205			1,642
8/20	3			65			1,707
8/21	2			56			1,763
8/23	3		150	64		150	1,827
8/24	1			35			1,862
8/27	2			216			2,078
8/28	3			209			2,287
8/29	3			445			2,732
8/30	2			336			3,068
Sub-total ^{2/}			150	3,068		150	3,068
GRAND TOTAL		4,543	150	3,136	4,543	150	3,136

^{1/} King salmon season.

^{2/} Fall salmon season.

TABLE 17

YUKON RIVER SUBSISTENCE CATCH DATA, 1968
(INCLUDES CANADIAN CATCHES)

Village	Date of Survey	Fishing Families	Dogs	Snow-Machines	Kings	Small ^{1/} Salmon	Total Salmon	Units of Gear		Fish-wheels
								5-1/2" Nets	8-1/2" Nets	
Alakanuk	8/1	55	188	48	205	14,184	14,389	89	2	0
Sheldon's Point	8/5	17	70	14	30	8,693	8,723	24	3	0
Emmonak	8/7	38	93	26	42	16,569	16,611	58	0	0
Aproka Pass & Vicinity	8/9	19	34	14	147	4,853	5,000	46	0	0
Kotlik	8/10	17	31	11	53	1,709	1,762	21	0	0
Mt. Village & Vicinity	8/11-12	43	135	34	238	7,312	7,550	43	6	0
Pitkas Point-St. Marys	8/13-16	37	179	18	168	9,166	9,334	37	2	0
Pilot Station	8/17	32	161	11	784	4,770	5,554	32	1	0
Marshall	8/20	21	158	10	365	3,530	3,895	21	2	0
Russian Mission	8/22	17	97	2	2,170	3,836	6,006	14	5	0
Holy Cross	8/22	25	79	7	1,418	10,309	11,727	17	13	0
Anvik	8/26	12	80	10	114	10,020	10,134	11	0	5
Grayling	8/26	17	126	7	208	8,225	8,433	12	3	3
Kaltag	8/28	21	181	9	60	12,090	12,150	17	0	8
Nulato	8/29	28	247	8	209	13,242	13,451	35	1	8
Koyukuk	8/30	14	109	3	398	3,541	3,939	19	0	0
Galena	8/30	8	87	7	456	1,079	1,535	3	4	3
Ruby	9/2	9	75	6	881	2,382	3,263	0	2	6
Tanana	9/4	12	169	5	627	13,406	14,033	1	3	9
Rampart	9/7	5	39	0	922	2,636	3,558	0	3	3
Stevens Village	9/7	7	74	2	787	2,022	2,809	3	4	4
Beaver	9/7	4	37	3	495	3,619	4,114	1	1	1
Fort Yukon	9/7	11	139	3	632	6,564	7,196	0	0	12
Fort Selkirk ^{2/}					200	500	700	1	0	0
Carmacks ^{2/}					1,200	200	1,400	9	0	0
Pelly River ^{2/}					600	50	650	5	0	0
Tatchun Creek ^{2/}					100	0	100	1	0	0
Teslin River ^{2/}					200	0	200	1	0	0
Stewart River ^{2/}					100	0	100	2	0	0
Dawson City ^{2/}					100	50	150	2	0	0

TABLE 17 (CON'T)

YUKON RIVER SUBSISTENCE CATCH DATA, 1968
(INCLUDES CANADIAN CATCHES)

Village	Date of Survey	Fishing Families	Dogs	Snow-Machines	Kings	Small ^{1/} Salmon	Total Salmon	Units of Gear		Fish-wheels
								5-1/2" Nets	8-1/2" Nets	
Ross River ^{2/}					200	0	200	2	0	0
Minto ^{2/}					100	100	200	1	0	0
Kluane River ^{2/}					0	200	200	3	0	0
MAIN RIVER TOTALS		469+	2,588+	258+	14,209	164,857	179,066	531	55	62
Allakaket	9/5	14	88	3	3	1,391	1,394	46	0	0
Alatna	9/5	2	19	0	1	99	100	4	0	0
Hughes	9/5	7	49	4	82	2,237	2,319	15	1	0
Huslia	9/5	10	65	7	35	3,677	3,712	16	0	0
KOYUKUK RIVER TOTALS		33	221	14	121	7,404	7,525	81	1	0
Minto	9/6	3	49	0	12	740	752	2	0	3
Nenana	9/6	4	82	4	462	6,055	6,517	2	2	6
TANANA RIVER TOTALS		7	131	4	474	6,795	7,269	4	2	9
Venetie	9/7	7	63	2	0	551	551	12	0	0
CHANDALAR RIVER TOTALS		7	63	2	0	551	551	12	0	0
Old Crow ^{2/}					28	10,000	10,028	21	0	0
PORCUPINE RIVER TOTALS					28	10,000	10,028	21	0	0
GRAND TOTAL		516+	3,003+	278+	14,832	189,607	204,439	649	58	71

^{1/} Includes small numbers of cohos and pinks.

^{2/} From Canadian Department of Fisheries, Whitehorse; only catch and type of gear available.

TABLE 18

COMPARATIVE ESCAPEMENT DATA FOR 1960-1968, YUKON RIVER DRAINAGE ^{1/}

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
East Fork, Andraefsky River	1,020	1,003	675*	-	867	-	361	-	380
West Fork, Andraefsky River	<u>1,220</u>	-	<u>762*</u>	-	<u>705</u>	355*	<u>303</u>	276*	<u>383</u>
Totals, Andraefsky River	2,240	-	1,437*	-	1,572	-	664	-	763
Anvik River	1,950	1,226	-	-	-	650*	638	336*	297*
Salcha River	1,660	2,878	937	-	450	408	800	-	735
Whitehorse Dam Bypass Actual Count ^{2/}	660	1,068	1,500	484	587	903	563	533	407

^{1/} With exception of Whitehorse Dam Count, escapement data are from aerial surveys, a (*) indicates poor survey conditions.

^{2/} 1,054 counted in 1959, 1959-67 data from Canadian Department of Fisheries, Whitehorse

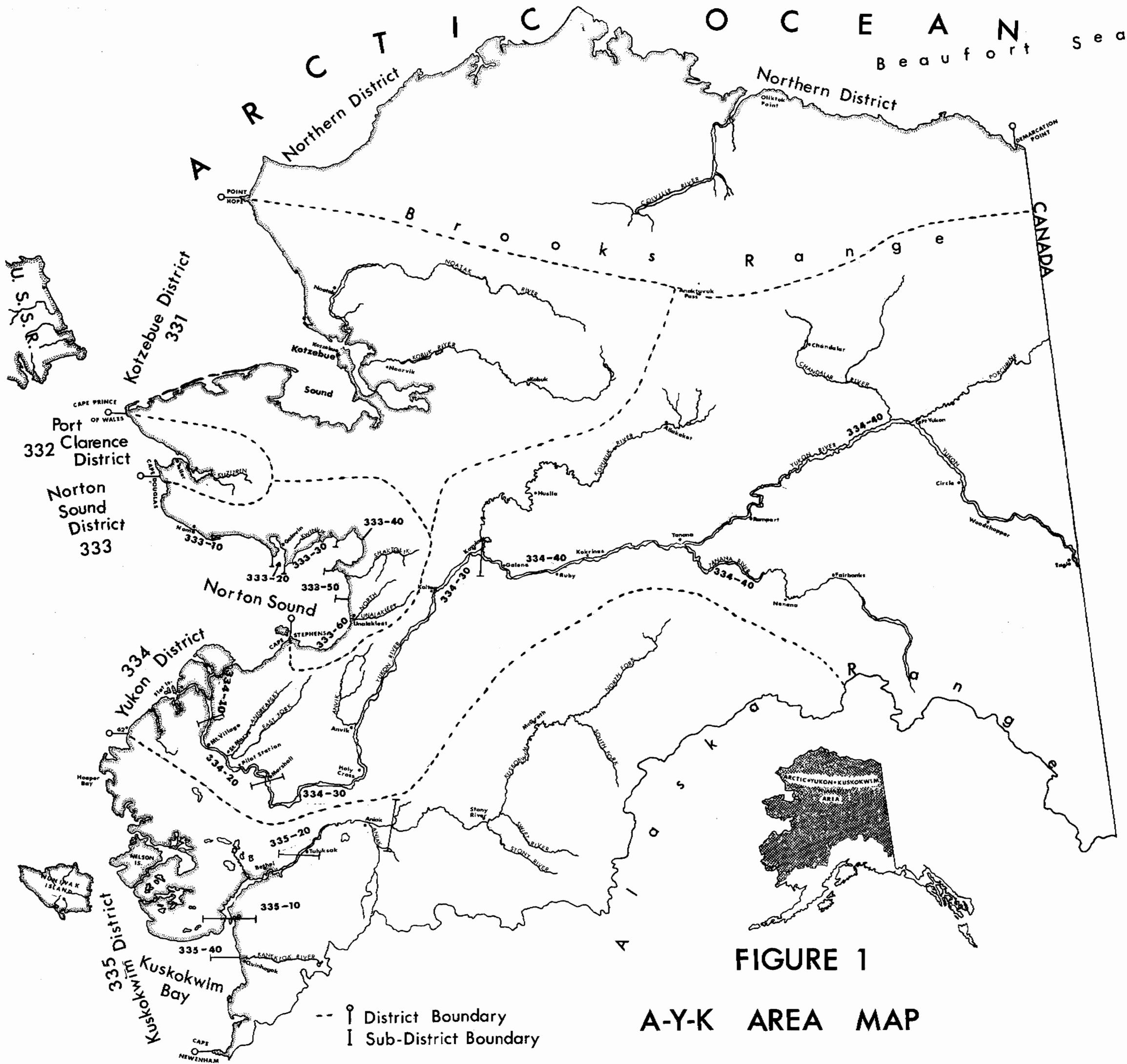


FIGURE 1

A-Y-K AREA MAP

-- District Boundary
 | Sub-District Boundary